



Introduction to the special issue *morphological spelling*

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In a 2017 *Language* paper (Berg and Aronoff 2017), we demonstrated on structural linguistic grounds that the spelling of English derivational suffixes is largely morphographic. For example, the word-final coda /is/ is reliably spelled as <ous> when the word is an adjective (the spelling is *uniform*) and as e.g. <us> or <ice> otherwise. Compare *nervous* vs. *service*: at least in spoken American English, both words have identical final rhymes. That means the *ous*-spelling is also unique in that it encodes morphological information (‘this word here is an adjective, and it is probably morphologically complex’). We also show that these morphological spellings emerged and regularized gradually over the last five centuries, without external guidance. The findings immediately lead to at least three questions:

1. Is the close correlation between form and function psychologically real, i.e. do readers of English use this cue?
2. Can similar phenomena be observed in other languages?
3. ... or for other types of English morphemes, i.e., stems?

The articles in this special issue, based on a two-day workshop in July 2018 that brought together linguists and psychologists, tackle these questions and present further research on morphological spelling from several perspectives within both disciplines. The collection demonstrates how progress can be made by applying well-established methods to a long-observed, but little explored linguistic phenomenon, with both theoretical and practical implications. The methods employed are experimental, typological, and computational; what unites them is their empirical approach to linguistic claims.

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The majority of papers explores the psycholinguistic dimensions of our findings. **Vera Heyer** investigates whether speakers can extend an existing morpho-graphic regularity (adjectives that end with /is/ like *nervous* are always spelled with final *-ous*) to novel words, and whether the application of this regularity depends on the speakers' spelling ability. Both turn out to be true: English spellers are aware of the regularity and use it when spelling novel words, but the degree of awareness hinges on spelling proficiency.

Rebecca Treiman, Sloan Wolter and **Brett Kessler** present converging results for both /is/ and /ik/ adjectives (like *hectic*): Spellers are aware of the regularity when spelling non-words in syntactically unambiguous contexts, and the degree of application depends on spelling proficiency. However, the overall degree to which this awareness is put to use is smaller than expected.

Anastasia Ulicheva, Marco Marelli and **Kathleen Rastle** take a more general look at spelling patterns that correlate closely with morphological information (not just suffixes, but also non-morphological word endings). Using innovative methodology (a crowdsourcing study), they show that spellers' sensitivity to these graphemic cues depends on a) the person's reading proficiency, operationalized as reading, spelling and author recognition tests (in line with Heyer's and Treiman et al.'s results) and b) how strongly the spelling pattern indicates the morphological information (the pattern's *uniqueness* in Berg and Aronoff 2018).

Nanna Fuhrhop takes the comparative perspective (question 2 above). She investigates the spelling of inflectional morphemes in three Germanic languages and five Romance languages. The invariant spelling of inflectional categories is an endpoint on a scale, she finds: The other endpoint is variant spelling, and in between there are a number of possible combinations, allowing for a more sophisticated typological description of writing systems.

Finally, our own contribution extends the morphographic perspective to other morphological units, namely stems. It is usually assumed that English and German stems often have a unique written form, and that this uniqueness is a guiding spelling principle (i.e., that e.g. *pair* and *pear* are spelled the way they are precisely because they refer to/are part of different lexemes). We show that while the degree of stem uniqueness is higher in English than in German, it is far from regular, and that the existing cases can be explained by historical phonological processes. The English writing systems tends to be phonographic for stems and morphological for affixes.

Overall, the results show the value of this line of research. The workshop has also led to further studies along similar lines (e.g., Treiman et al. 2020), and we hope for more collaborations in the future.

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